

REMARKS

Claims 1 – 11 and 21 – 24 are pending in the present application and are presented for reconsideration in view of the foregoing amendments and the following remarks.

In the outstanding Office Action, claims 1 – 4 and 21 – 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. patent no. 5,323,608 to Honma (hereinafter referred to as “the Honma ‘608 patent”) in view of U.S. patent no. 5,177,960 to Hitachi et al. (hereinafter referred to as “the Hitachi et al. ‘960 patent”); claims 6 – 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Honma ‘608 patent in view of the Hitachi et al. ‘960 patent in further view of German reference DE 3,844,350 (hereinafter referred to as “the German ‘350 reference”) or U.S. patent no. 5,384,100 to Freund (hereinafter referred to as “the Freund ‘100 patent”) or U.S. patent no. 4,665,051 to Nonnenmann (hereinafter referred to as “the Nonnenmann ‘051 patent”); and claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Honma ‘608 patent in view of the Hitachi et al. ‘960 patent in further view of U.S. patent no. 5,734,402 to Hitachi et al. (hereinafter referred to as “the Hitachi et al. ‘402 patent”).

Additionally, the Examiner asked that the Applicants affirm the election of species made via telephone on July 28, 2004; acknowledged the claim for foreign priority; objected to the disclosure due to informalities; objected to claim 6 due to informalities; rejected claims 1 – 11 and 21 – 23 under 35 U.S.C. §112, second paragraph, as being indefinite; and rejected claims 1 – 11 and 21 – 23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 – 18 of U.S. patent no. 6,287,523 to Hirohashi et al. (hereinafter referred to as “the Hirohashi et al. ‘523 patent”) in view of the Honma ‘608 patent.

By this Response and Amendment, claim 1 has been amended to recite “[a] catalyst

converter comprising: a tubular member having *an inner wall*; a carrier contained in the tubular member, the carrier including *a catalyst carrier sheet folded successively back into* a series of sheets superposed with each other, *respective one of the sheets* extending transversely between a point and another point on the *inner wall*; and an engaging plate *extending across* *respective one of the sheets*, the engaging plate being engaged with the series of sheets;”

claim 5 has been amended to recite “[a] catalyst converter according to claim 1, wherein the series of the sheets is *shaped* in S-shapes;”

claims 12 – 20 have been canceled; and

claim 24 has been newly added.

Support for the amendments to claim 1 can be found on page 10, lines 25 – 31 and page 11, lines 12 – 23 of the original application; and support for the addition of claim 24 can be found on page 10, line 34 through page 11, line 6. Therefore, it is respectfully submitted that the above amendments do not introduce any new matter within the meaning of 35 U.S.C. §132.

Election of Species Requirement

The Examiner requires election of one of two species of claims, asserting that Species I is represented in claims 1 – 11 and 21 – 23 and that Species II is represented in claims 12 – 20.

Response

By this Response and Amendment, Applicants hereby affirm the election of Species I made by telephone on July 28, 2004. Claims 12 – 20 are hereby canceled without prejudice or disclaimer.

Objection to the Specification

The Examiner objected to the specification because of informalities asserting that: “On

page 1, in the insertion before the line of the sentence –, now abandoned– should be inserted after “1998;” “in a” should be changed to –in– in line 16 of page 14; and “tube3” should be changed to –tube– in line 35 of page 16.

Response

By this Response and Amendment, the specification has been amended in accordance with the Examiner’s suggestions. Accordingly, the Applicants respectfully request that the Examiner reconsider and withdraw the objections.

Objection to Claim 6

The Examiner objected to claim 6 because of an informality, asserting that “a” in line 7 should be changed to –the–.

Response

By this Response and Amendment, claim 6 has been amended in accordance with the Examiner’s suggestion. Accordingly, the Applicants respectfully request that the Examiner reconsider and withdraw the objection.

Rejections Under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 1 – 11 and 21 –23 as being indefinite. Specifically, the Examiner asserted that it is unclear what is intended by “respective” in claim 1, lines 5 – 8.

Response

By this Response and Amendment, claim 1 has been amended to eliminate any ambiguity with respect to the term “respective.” In particular, the term “respective” has been removed except for where it refers to “one of sheets,” thereby showing that the same sheet is being referred to in each instance.

Accordingly, the Applicants respectfully request that the Examiner reconsider and withdraw the rejections.

Rejections Under 35 U.S.C. §103(a)

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

1. Rejections of Claims 1 – 4 and 21 – 23

The Examiner rejected claims 1 – 4 and 21 – 23 as being unpatentable over the Honma '608 patent in view of the Hitachi et al. '960 patent.

Response

By this Response and Amendment, independent claim 1 has been amended to recite “[a] catalyst converter comprising: a tubular member having *an inner wall*; a carrier contained in the tubular member, the carrier including *a catalyst carrier sheet folded successively back into a series of sheets superposed with each other, respective one of the sheets* extending transversely between a point and another point on the *inner wall*; and an engaging plate *extending across respective one of the sheets*, the engaging plate being engaged with the series of sheets.” As amended, the rejection to independent claim 1 is respectfully traversed.

Regarding the Honma '608 patent, a flat sheet 20 and a wavy sheet 18 are stacked and rolled up together, and spacings between flat sheets do not enlarge due to exhaust-gas (*see*

especially Fig. 2). This structure differs from the catalyst converter of the invention where a sheet is folded successively back to form a series of sheets. Thus, Honma does not disclose or suggest the catalyst converter as recited in amended independent claim 1.

Regarding the Hitachi '960 patent, figure 5 illustrates a catalyst converter having a combination of flat sheets 20 and wavy sheets 10 stacked on each other. As with the Honma '608 patent, this structure differs from a catalyst carrier sheet folded successively back into a series of sheets superposed with each other as recited in amended independent claim 1. Thus, the Hitachi et al. '960 patent does not disclose or suggest the catalyst converter of as claimed in the present application, nor does this reference make up for the deficiencies of the Honma '608 patent.

The Honma '608 patent also does not disclose that the engaging plate extends across respective one of the sheets as recited in claim 1. Neither the Honma '608 patent nor the Hitachi et al. '960 patent teach or suggest that a catalyst carrier sheet is folded successively back into a series of sheets superposed with each other, and is contained in a tubular member.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection to claim 1. Also, as the dependent claims contain all of the limitations of the independent claim from which they depend, Applicants assert that claims 2 – 4 and 21 – 23 are patentable over the cited reference for at least the same reasons as claim 1. Therefore, Applicants also request that the Examiner reconsider and withdraw the rejections to claims 2 – 4 and 21 – 23.

2. Rejections of Claims 6 – 11

The Examiner rejected claims 6 – 11 as being unpatentable over the Honma '608 patent

in view of the Hitachi et al. '960 patent in further view of the German '350 reference or the Freund '100 patent or the Nonnenmann '051 patent.

Response

By this Response and Amendment, independent claim 1 has been amended and, as amended, the rejections thereto and the rejections to the claims dependent thereon are respectfully traversed. The arguments above with respect to the Honma '608 patent and the Hitachi et al. '960 patent are herein incorporated by reference.

The German '350 reference, the Freund '100 patent and the Nonnenmann '051 patent all disclose a tubular catalyst converter having corrugated sheets that are wound and arranged in layers within the outer tube. However, none of these cited references accounts for the deficiencies of the Honma '608 patent and the Hitachi et al. '960 patent that a sheet is folded successively back into a series of sheets. Further, neither the German '350 reference, the Freund '100 patent nor the Nonnenmann '051 patent show "an engaging plate extending across respective one of the sheets" as recited in amended independent claim 1. Therefore, as these features are neither taught nor suggested by any of the cited references Applicants respectfully assert that claim 1 is patentable thereover.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection to claim 1. Also, as dependent claims contain all of the limitations of the independent claim from which they depend, Applicants assert that claims 6 – 11 are patentable over the cited references for at least the same reasons as claim 1. Therefore, Applicants also request that the Examiner reconsider and withdraw the rejections to claims 6 – 11.

3. Rejection of Claim 5

The Examiner rejected claim 5 as being unpatentable over the Honma '608 patent in view of the Hitachi et al. '960 patent in further view of the Hitachi et al. '402 patent.

Response

By this Response and Amendment, independent claim 1 has been amended and, as amended, the rejections thereto and the rejections to the claims dependent thereon are respectfully traversed. The arguments above with respect to the Honma '608 patent and the Hitachi et al. '960 patent are herein incorporated by reference.

Applicants respectfully note U.S. patent no. 5,734,402 is directed toward a "Solid Ink Stick Feed System" for use in a color printer. However, the Examiner lists a second Hitachi et al. reference in the Notice of References Cited having a U.S. Patent No.: 5,374,402.

The Hitachi et al. '402 patent discloses a metal-made honeycomb carrier body for an exhaust gas cleaning catalyst. The carrier body is made by placing a planar metal band and a corrugated metal band over each other and, in most embodiments, wrapping the sheets in a spiral formation. However, the Hitachi et al. '402 patent does not account for the deficiencies of the Honma '608 patent and the Hitachi et al. '960 patent that a sheet is folded successively back into a series of sheets. Further, the Hitachi et al. '402 patent does not show "an engaging plate extending across respective one of the sheets" as recited in amended independent claim 1. Therefore, as these features are neither taught nor suggested by any of the cited references Applicants respectfully assert that claim 1 is patentable thereover.

Accordingly, as dependent claims contain all of the limitations of the independent claim from which they depend, Applicants assert that claim 5 is patentable over the cited references for at least the same reasons as claim 1. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections to claim 5.

Double Patenting Rejection

The Examiner rejected claims 1 – 11 and 21 – 23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 – 18 of U.S. patent no. 6,287,523 in view of the Honma '608 patent.

Response

A Terminal Disclaimer is being filed along with this Response and Amendment thereby rendering the Examiner's rejection moot. Applicants submit that the Terminal Disclaimer is being filed to further prosecution of this application and is not to be construed as an admission that the present claims are obvious over claims 1 – 18 of the '523 patent.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding double patenting rejection.

MISCELLANEOUS

Claim 24 is newly added. As newly added claim 24 depends from amended independent claim 1, Applicants respectfully assert that newly added claim 24 is patentable over the cited references for at least the same reasons as amended independent claim 1.

CONCLUSION

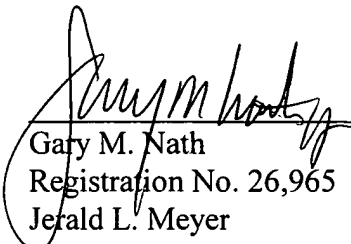
In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
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